

TYNDP 2014 – process

Grid challenges towards 2030

RG Baltic Sea

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RGBS Stakeholder meeting - 10/04/13

Outline of presentation

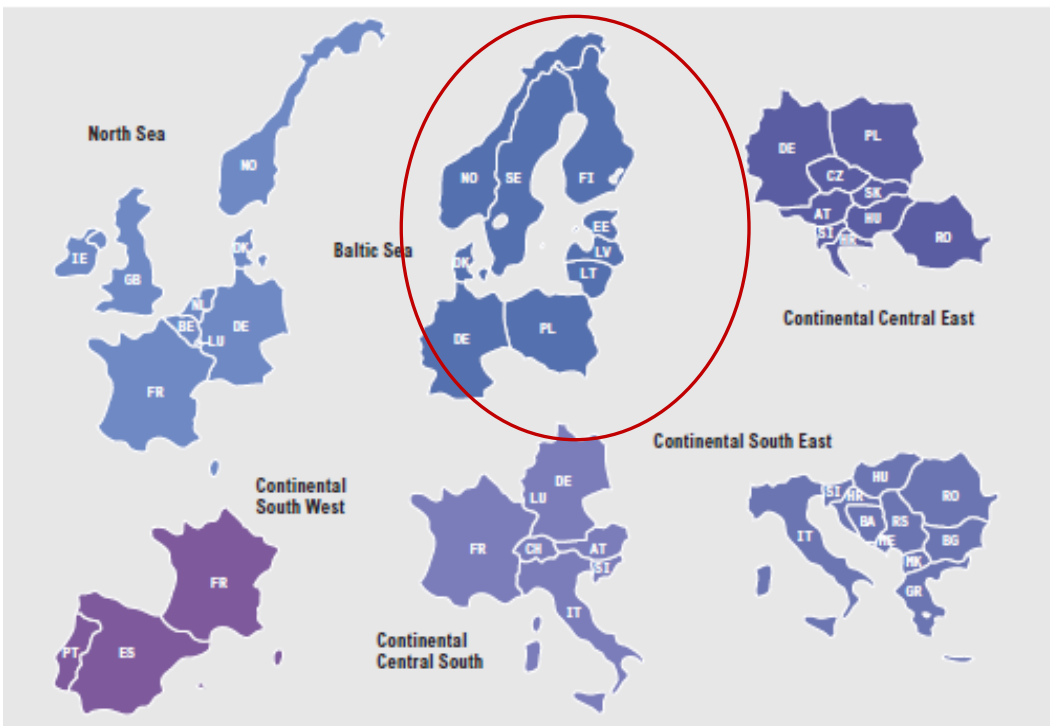
Introduction

The TYNDP 2014 process

Grid development perspectives for 2030

Next steps

Entso-e regional groups for system development



Baltic Sea group consists of 9 TSO's:
Fingrid, Svenska Kraftnät, Statnett,
Energinet.dk, Elering, Litgrid,
Augstsprieguma tikls, PSE Operator,
50Hertz Transmission

Energinet.dk and Statnett also belong
to the North Sea group, while PSE
Operator and 50Hertz also belongs to
the Continental Central East group

Intentional overlapping of the six
regional groups is intended to promote
information sharing

Why a Ten-Year Network Development Plan?

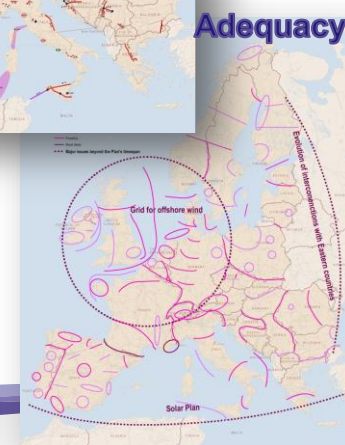
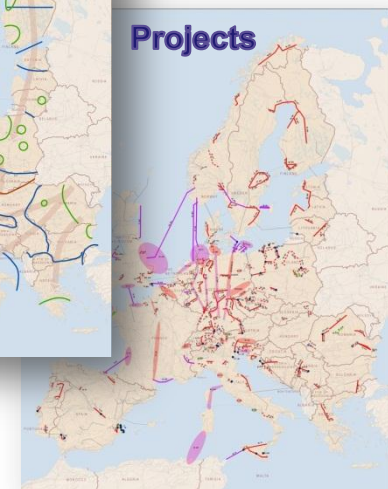
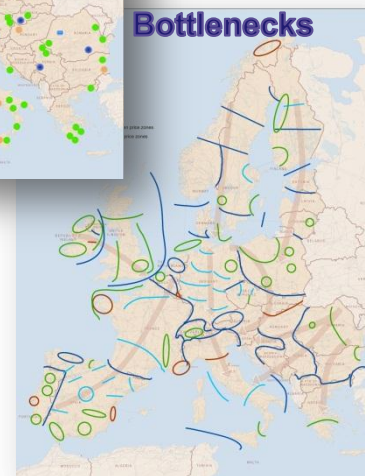
Regulation (EC) 714/2009 – “In order to ensure greater transparency regarding the entire electricity transmission network in the [Union], the ENTSO for Electricity should draw up, publish and regularly update a non-binding [Union]-wide ten-year network development plan”

Transparency

TSO cooperation platform

Stakeholder involvement

Inform EU policy and investment decisions



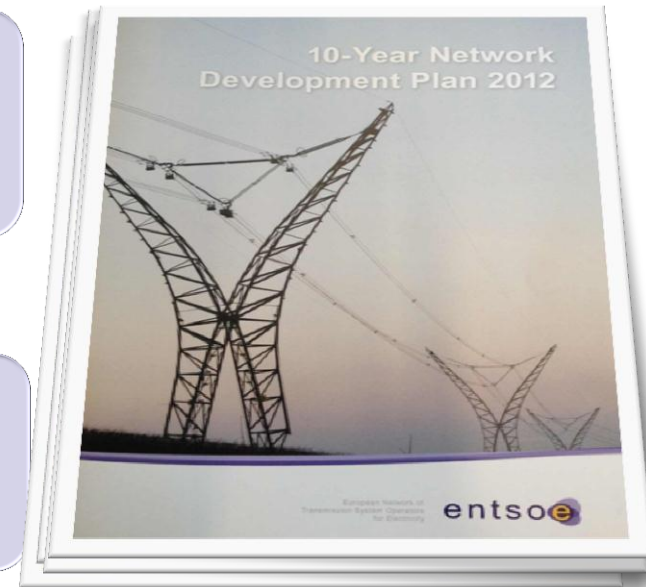
The TYNDP 2012 package

a vision for the
European extra high
voltage grid

- non-binding
- updated every 2 years
- based on common market and network studies
- generation adequacy outlook

a comprehensive
document suite that
includes

- Ten-Year Network Development Plan
- Scenario Outlook and Adequacy Report
- 6 Regional Investment Plans



Consultation: 1 Mar - 26 Apr.

Final release: 5 July 2012

www.entsoe.eu

TYNDP – Ten-Year Network Development Plan

- ✓ Pilot-TYNDP published in June 2010
- ✓ TYNDP 2012 published in July 2012
- ✓ TYNDP 2014 expected for July 2014
 - Improved process from previous versions



✓ **As for TYNDP 2012**

- Two-year process -> publication in July 2014
- The package structure will be kept: TYNDP + 6 RgIPs + SO&AF

✓ **New for TYNDP 2014**

- **2030 horizon** -> longer term horizon based on the ENTSO-E 2030 visions
- **Multilateral 2030** studies split in to four phases (exploration, assessment, RegIP/TYNDP reports drafting and consultation and finalization)
- Public release of “2013 Monitoring Update” of the TYNDP 2012 Table of Projects (June 2013)

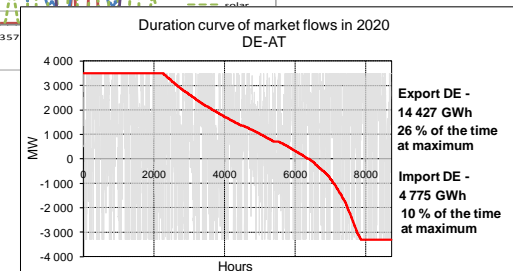
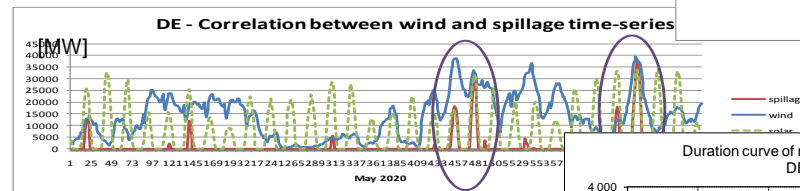
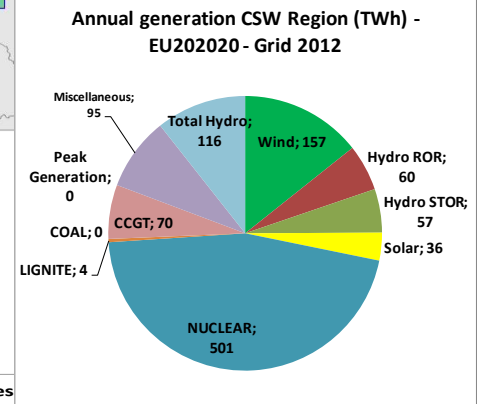


- ✓ **New for TYNDP 2014 (continuation)**
- ✓ Pan-European Expert Group set up to perform pan-European Market Studies
- ✓ Cost and Benefit Analysis (CBA) methodology for projects of pan-European Significance
- ✓ Improved stakeholder involvement: external workshops, bilateral meetings, consultation + New Stakeholder Group
- ✓ 3rd party procedure (released in January 2013)

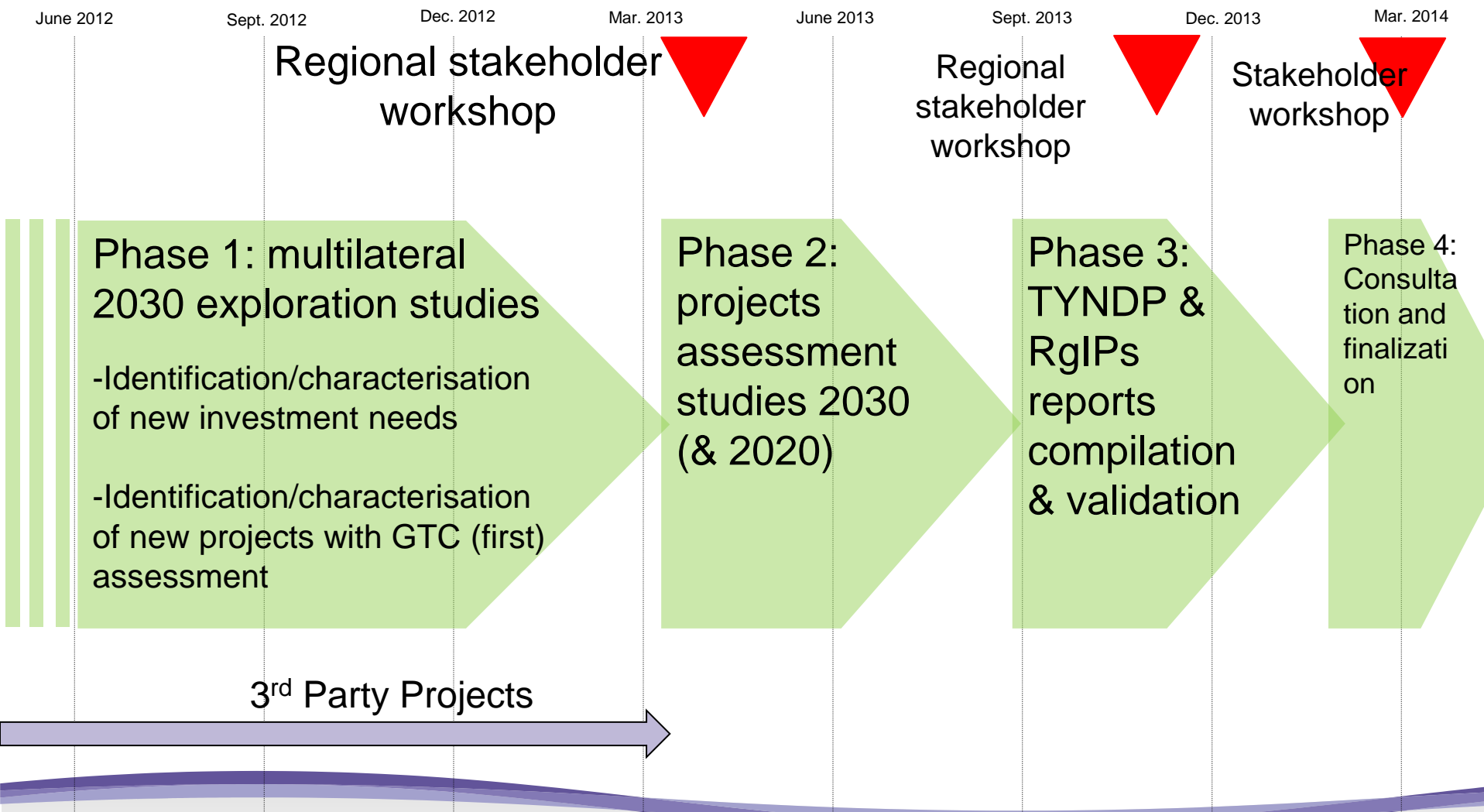
A dense 2-year long study process



- Scenario elaboration & validation
- Market studies
- Network studies
- Project identification & valuation
- Reports compilation



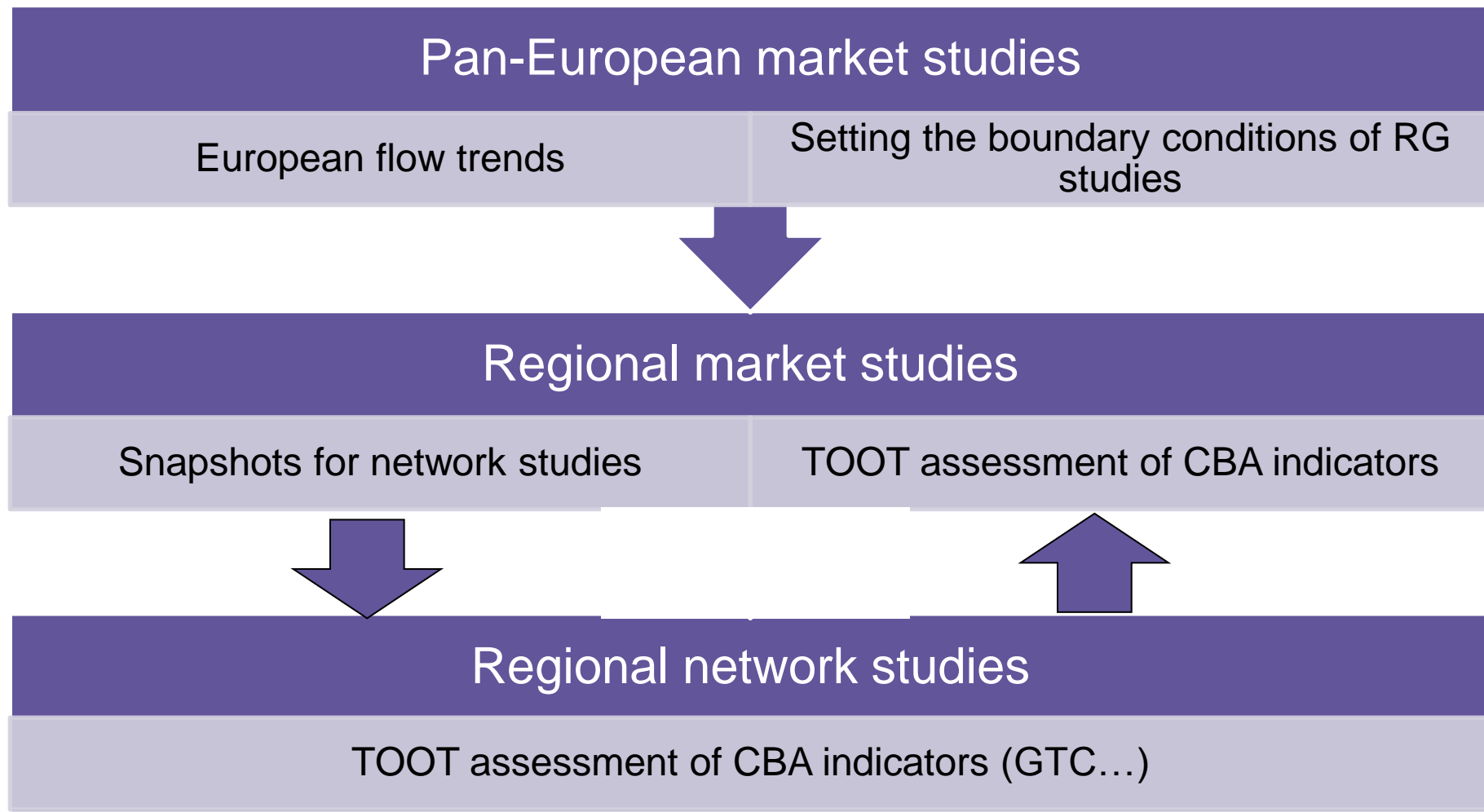
TYNDP 2014 – Process split in phases





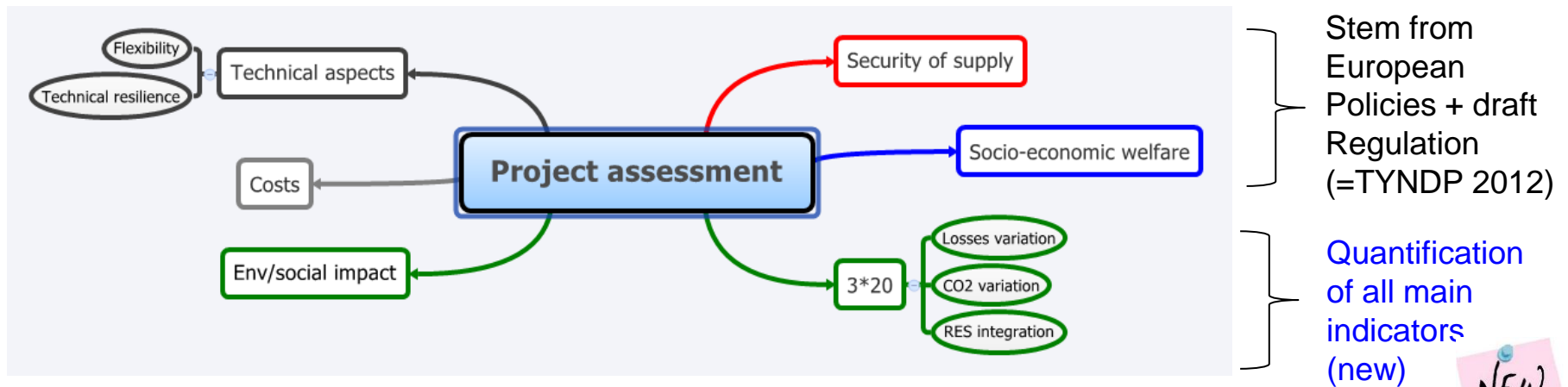
- Identify new investment needs & projects by 2030
- Activities in Regional Groups
 - Prepare common datasets
 - Re-visit the joint studies already prepared for 2030
 - Launch common 2030 studies to fill the gaps
 - Prepare candidate reinforcements for the assessment phase

Phase 2 of TYNDP 2014 – Assessment phase

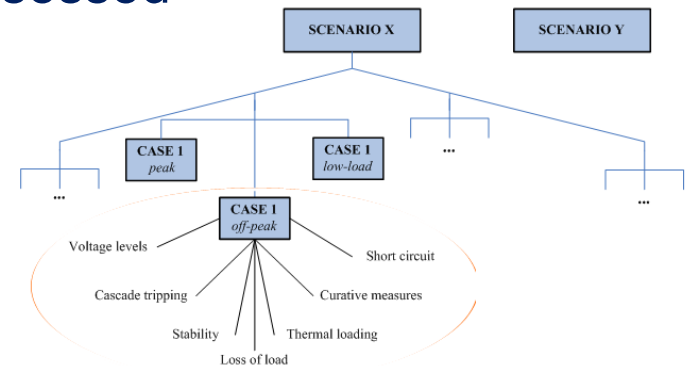


CBA Project assessment

✓ Framework for assessment



- Analysis with and without the project assessed with all projects in (TOOT)
- Multi-scenarios, multi-cases
- Project = investments clustered according to CBA





Perspectives for grid development towards 2030

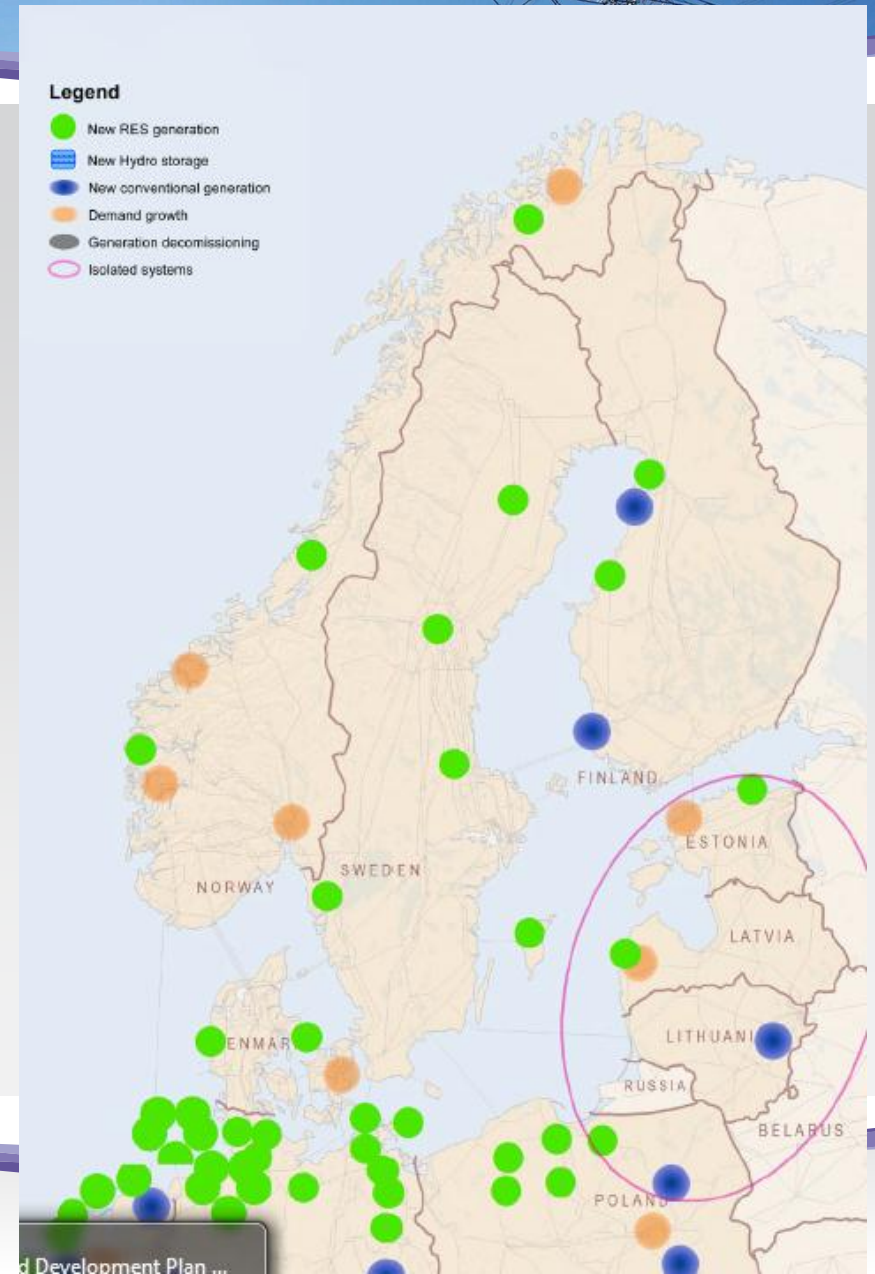
- Regional view

From TYNDP 2012: Drivers for grid development towards 2020

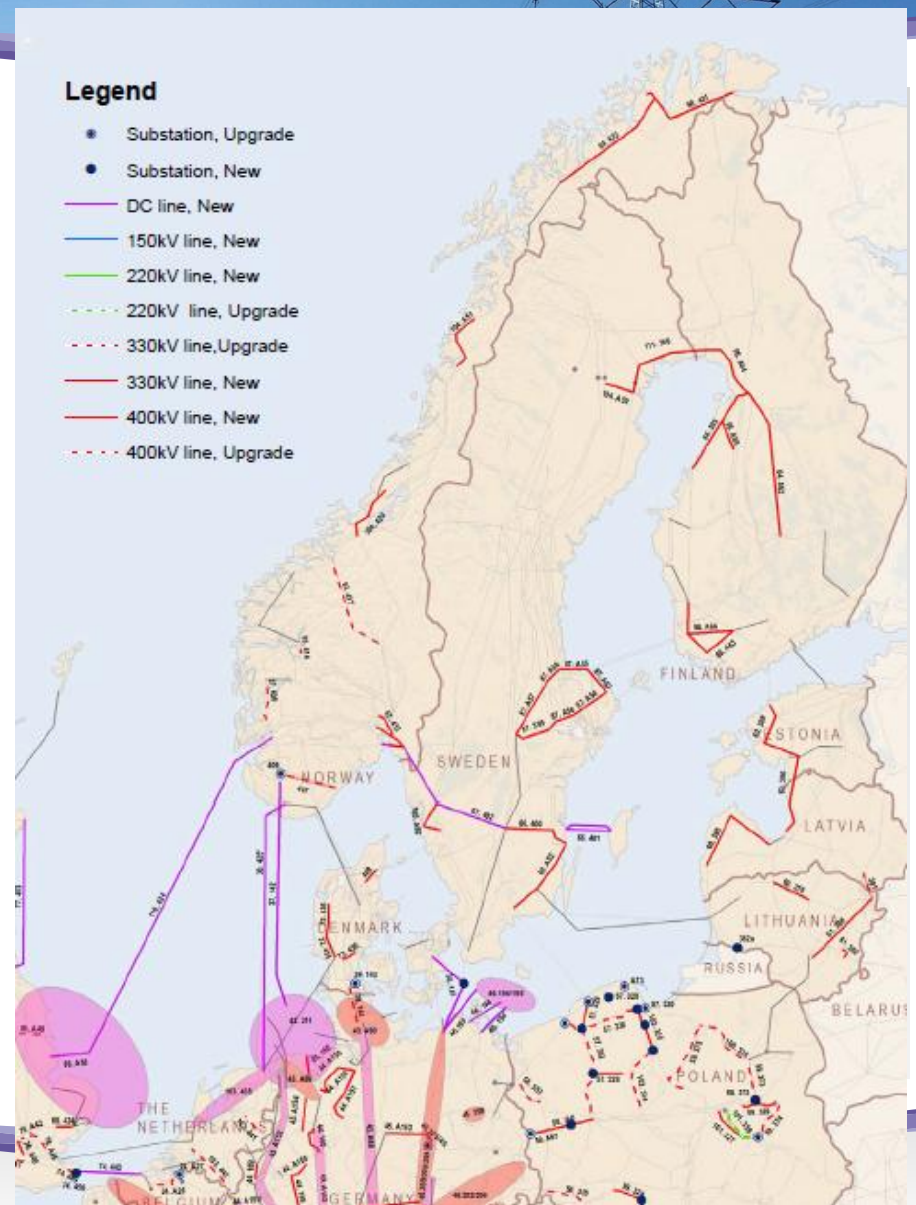
Increased market integration within Nordic area and towards Baltics and continental Europe/UK

Integration of new generation (RES and conventional)

Security of supply and accommodate demand growth



Projects from TYNDP 2012 – mid term and long term



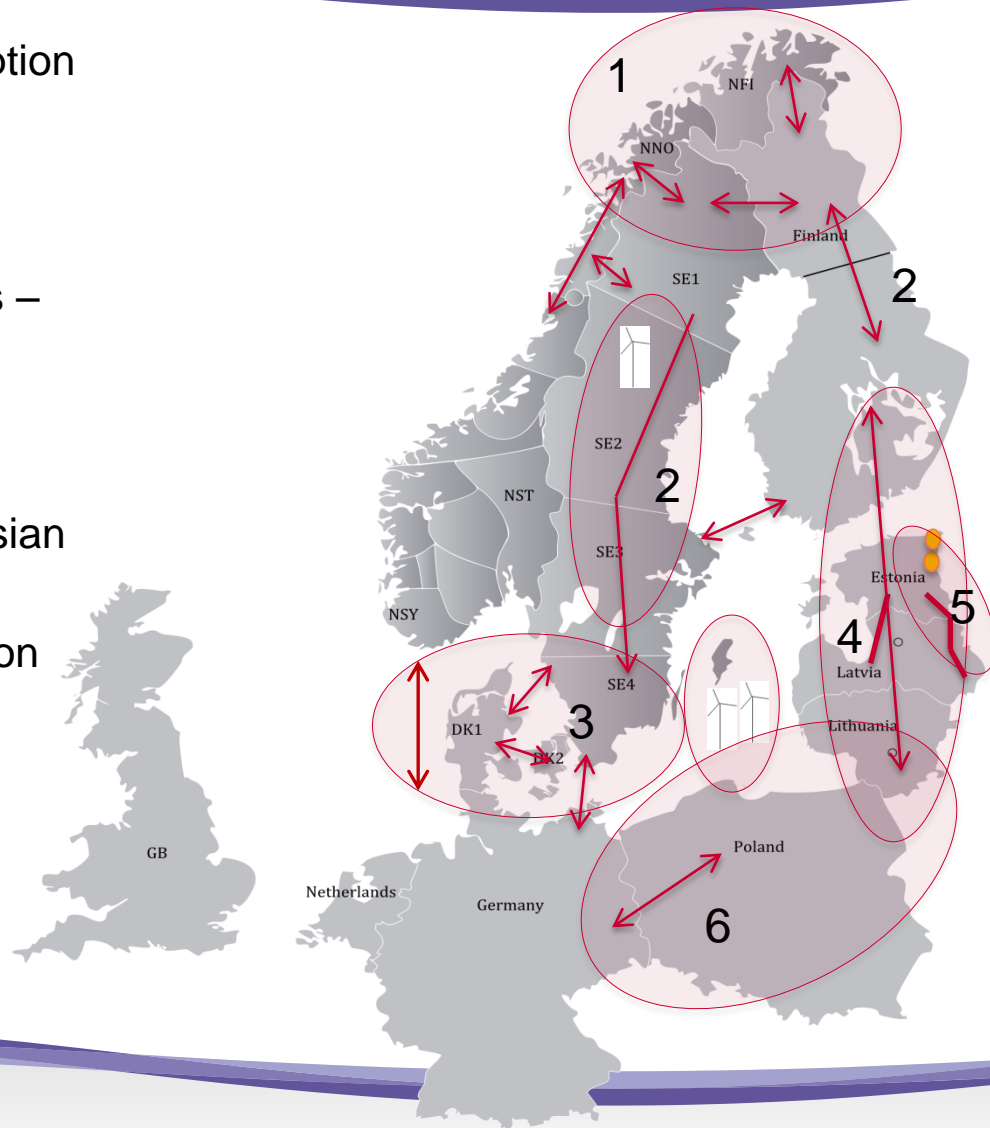
Perspectives towards 2030



- **Integration of renewables continues – at what pace?**
 - **More RES generation**
 - **Less conventional generation**
 - **Increased need for balancing power**
 - **Energy transmission over long distances**
 - **Security of supply in a system with more intermittent generation (solar and wind)**
- **Market integration**
 - **Further development of the internal energy market (IEM)**
 - **Baltic states in synchronous operation with Continental Europe**
 - **Russian market developments unclear**

Identified areas of interest for 2020-2030 horizon

1. Arctic area – new consumption and RES
2. North-south flow through Norway/Sweden/Finland
3. Increased capacity Nordics – Continental Europe/UK
4. North-South through Baltic states
5. Power flow control on Russian border
6. Baltic synchronous operation with Continental Europe



Next step: Assessment phase and drafting

Identified areas of interest will be analysed further, and concrete projects will be identified

Possible new projects will be subject to Cost-Benefit-Analysis (CBA) according to Entso-e guidelines

New projects for TYNDP 2014 will be selected based on CBA analysis and considerations from the involved TSOs

TYNDP projects list is non-binding, and projects can be taken out of the list in later plans, if no longer considered beneficial





Thank you for your attention!